TEVEROVSKIY, V.I.

Concerning N.M.Litsyn's article "Relay control of linear-
asymmetric objects". Avtom. i telem. 23 no.7:987-988 Jl
'62.   (MIRA 15:9)

(Automatic control)

ACCESSION NR: AP4033357   S/0103/64/025/003/0339/0346

AUTHOR: Teverovskiy, V. I. (Dnepropetrovsk)

TITLE: Method for analyzing periodic conditions in an on-off system containing two arbitrarily connected relays

SOURCE: Avtomatika i telemekhanika, v. 25, no. 3, 1964, 339-346

TOPIC TAGS: automatic control, relay automatic control, on off automatic control, 2 relay automatic system

ABSTRACT: A new method, derived from Ya. Z. Tsy*pkin's frequency method, deals with 2-position relays that have symmetrical hysteresis characteristics without deadband; a block diagram of the on-off system in question is shown in Enclosure 1. The system behavior is described by these equations:

$$x_1 = f_1 - z_{11} - z_{21}, \quad x_2 = f_2 - z_{22} - z_{12}, \quad z_{ik} = W_{ik}(p)y_i,$$
$$y_i = \varphi_i(x_i) \quad (i, k = 1, 2).$$

Card 1/4

ACCESSION NR: AP4033357

Here, $\mathcal{Y}_i$ are the relay functions and $W_{ik}(p)$ are operators of the system linear part; $(p \equiv d/dt)$. The simplest periodical conditions with a period $2T = 2\pi/\omega_0$ can exist in the system; all system variables are periodic symmetrical functions of time t.

Then:
$$\bar{x}_1 \left(\frac{\pi}{\omega_0}\right) = -\chi_{01}, \qquad \dot{\bar{x}}_1 \left(\frac{\pi}{\omega_0} - 0\right) < 0,$$

$$\bar{x}_1(t) > -\chi_{01} \text{ with } 0 < t < \frac{\pi}{\omega_0},$$

$$\bar{x}_2 \left(\tau + \frac{\pi}{\omega_0}\right) = -\bar{x}_2(\tau) = -\chi_{02},$$

$$\dot{\bar{x}}_2 \left(\frac{\pi}{\omega_0} + \tau - 0\right) = -\dot{\bar{x}}_2(\tau - 0) < 0,$$

$$\bar{x}_2(t) > -\chi_{02} \text{ with } \tau < t < \tau + \frac{\pi}{\omega_0},$$

where $0 < \tau < 2\pi/\omega_0.$

Card 2/4

ACCESSION NR: AP4033357

Parameters ω_0 and τ of self-oscillations with $(f_1 \equiv f_2 \equiv 0)$ and of forced oscillations are determined, as well as the stability of such oscillations. The results are applicable to an analysis of 2-loop and single-loop systems if the frequency characteristics of their linear parts are known. Orig. art. has: 5 figures and 33 formulas.

ASSOCIATION: none

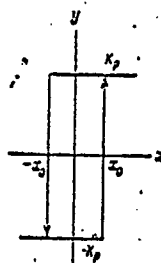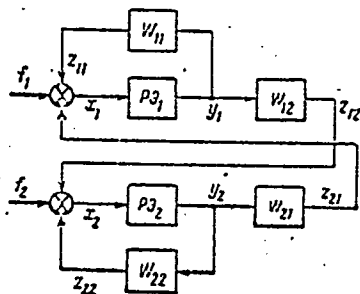SUBMITTED: 03Dec63   DATE ACQ: 15May64   ENCL: 01

SUB CODE: DP, IE   NO REF SOV: 006   OTHER: 000

Card 3/4

An on-off automatic-control
system containing 2 arbitra-
rily connected relays

Relay-element
characteristic

4/4

Card

L 9007-66   EWT(d)/EPF(n)-2/EWP(1)   IJP(c)   WW/BC

ACC NR: AP5027898   SOURCE CODE: UR/0103/65/026/011/2044/2050

AUTHOR: Teverovskiy, V.I, (Dnepropetrovsk)

ORG: none

TITLE: Selfoscillations of relay systems containing a component with stepwise changing parameters

SOURCE: Avtomatika i telemekhanika, v. 26, no. 11; 1965, 2044-2050

TOPIC TAGS: oscillation, electric relay, automatic control system, servomechanism, control system stability, AUTOMATIC CONTROL THEORY

ABSTRACT: Earlier, the author constructed relationships which make it possible, by using the frequency method of Ya. Z. Tsypkin (Teoriya releynykh sistem avtomaticheskogo regulirovaniya. Gostekhteoretizdat, 1955.), to analyze the stability and to determine the parameters of the periodic mode of operation of a relay automatic control system (RACS) containing a component with parameters changing in a stepwise manner with a change in the output coordinate of the relay component. A later work by the author presents a method of determining the parameters of selfoscillations of such a RACS by

Card 1/2   UDC: 62-504.3

L 9007-66
ACC NR: AP5027898

3

means of the L.S. Gol'dfarb (O nekotorykh nelineynostyakh v sistemakh regulirovaniya. Avtomatika i telemekhanika, t. VIII, No. 5, 1947.) approximation method. The present article investigates the effect of the variation of the component parameters on the nature and condition of existence of the selfoscillations. It is found that the variations of the parameters of even a single component may lead to a quantitative and qualitative variation of the periodic mode of operation. An increase in the time constant of the driver of the servomechanism in the intervals leads to the appearance of difficult-to-repress LF selfoscillations. A specially organized periodic increase in the time constant may be the means of decreasing the periodic constituent error of the system and an expansion of the passband (through an increase in the selfoscillation frequency). Author expresses gratitude to Ya. Z. Tsypkin for his attention to this work, and to Z. A. Didenko and V.S. Abramov for assistance in illustrating the article. Orig. art. has: 8 figures and 17 formulas.

SUB CODE: IE, EE, EC / SUBM DATE: 09Jul64 / ORIG REF: 007 /

Card 2/2

L 17852-66   EWA(h)/EWT(1)
ACC NR: AP6004552

SOURCE CODE: UR/0103/66/000/001/0087/0094

AUTHOR: Teverovskiy, V. I. (Dnepropetrovsk)
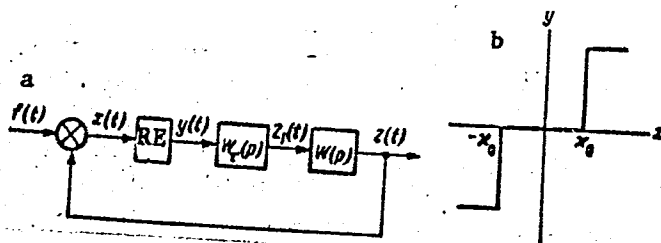
ORG: None

$3\,0$

B

TITLE: The periodic operation of a relay system with variable "pure" delay 25

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 87-94

TOPIC TAGS: automatic control, relay system

ABSTRACT: The article presents the methodology for the analysis of periodic operations of automatic relay systems containing an element with variable "pure" delay (Fig. 1).

a

b

Card 1/2

UDC: 62-504.3

2

L 17852-66

ACC NR: AP6004552

Fig. 1. Single-loop automatic relay system.
RE - relay element with the symmetrical characteristic,
b; W_γ (p) $= e^{-p\gamma}$, with γ - variable delay; $W(p)$ -
operator of that part of the system with time-constant
parameters.

The author discusses the characteristics of the relay, derives expressions des-
cribing the stability of periodic operation, and investigates in considerable de-
tail the influence of the change in delay time on the conditions for self-oscilla-
tion excitation. Orig. art. has: 27 formulas and 4 figures.

SUB CODE: 13 / SUBM DATE: 10May65 / ORIG REF: 004

Card 2/2   nst

L 28464-66   EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(1)/ETC(m)-6   IJP(c)
JD/HW

ACC NR: AP6010271   SOURCE CODE: UR/0381/66/000/001/0024/0034

AUTHOR: Samsonov, Yu. I.; Teverovskiy, V. I.; Anikeyev, Ya. F.; Spil'nik, V. F.;
Butenko, A. I.; Vit'ko, P. I.

ORG: Ukrainian Scientific Research Tube Institute (Ukrainskiy nauchno-issledovatel'-
skiy trubnyy institut); Nikopol' Southern Tube Plant (Nikopol'skiy yuzhnotrubnyy
zavod)

TITLE: Quality control of thin-walled tubes

SOURCE: Defektoskopiya, no. 1, 1966, 24-34

TOPIC TAGS: ultrasonic flaw detector, flaw detection, metal tube, quality control/UDT-4
ultrasonic flaw detector, IDTs-3M ultrasonic flaw detector

ABSTRACT: The article presents the results of the research and development work on
UDT-4 ultrasonic flaw finders at the Ukrainian Scientific Research Tube Institute and
compares their performance with that of the IDTs-3M ultrasonic flaw finder. The UDT-4
pulsed ultrasonic flaw finder is designed for the quality control of thin-walled tubes
through the excitation of normal waves in their walls. It consists of an electronic
unit and a mechanical-acoustical part. The inspected tube is drawn through the device.
If a flaw is present, a lamp glows on the panel of the electronic unit and at the same
time the tube-drawing mechanism halts. The defective spot is pinpointed and subse-

Card 1/2   UDC: 620.179.16

L 28464-66

ACC NR: AP6010271

O

quently metallographically examined. The UDT-4 reliably reveals defects of the scale, film, scratch, crack and other types. Compared with the IDTs-3M the UDT-4 has a slower tube-drawing mechanism. On the other hand, the IDTs-3M is inferior in that it cannot be used to inspect bent or curved tubes and it involves vibration of the tube, which generates spurious signals. This comparison implies that a new flaw finder embodying the advantages of both devices can be developed. The UDT-4 in its present form may be used for high-speed flaw detection in shops fabricating a broad range of thin-walled precision tubes if the device is so modified as to use several ultrasonic pickups aligned along the tube axis. Thus, e.g. if 5-6 pickups with beam width of 10 mm each are used to inspect tubes rotating at the rate of 200 RPM, a productivity of approximately 600 m/hr or more than 4000 m per shift may be achieved. In mass production of tubes of a limited range of types, on the other hand, it is best to use ultrasonic flaw finders with a series of pickups mounted over the tube perimeter. Orig. art. has: 5 figures.

SUB CODE: 13, 11, 20/ SUBM DATE: 27Oct64/ ORIG REF: 001

Card 2/2

L 46715-66   EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(l)   IJP(c)

ACC NR: AP6023646   JD/HW   SOURCE CODE: UR/0381/66/000/002/0044/0051

AUTHOR: Anikeyev, Ya. F.; Teverovskiy, V. I.; Panikov, N. N.

ORG: All-Union NII of the Tube Industry (Vsesoyuznyy NII trubnoy promyshlennosti)

TITLE: Ultrasonic flaw detection in tubes of small diameter

SOURCE: Defektoskopiya, no. 2, 1966, 44-51

TOPIC TAGS: ultrasonic flaw detection, metallographic examination , metal tube

ABSTRACT: Ultrasonic flaw detection was studied in nonmagnetic tubes of 4-10 mm dia-
meter and 0.1-0.8 mm wall thickness. Experiments were carried out on various ultra-
sonic instruments: IDTs-3M (TsNIITMASh), UDT-4 (VNITI) and the IDTs-5. While the
IDTs-5 machine performed best, it had to be modified to handle smaller tube diameters;
the IDTs-5 was rated for 6-10 mm tubes with 0.1-0.8 mm wall thicknesses. 2-3 mm long
defects at a depth of 0.03-0.05 mm were detected. The IDTs-5 pickup was modified to
focus the ultrasonic waves in order to detect defects 0.5 mm long at a depth of 0.015
mm when operated at frequencies up to 5 megacycles/sec. Pictures of the new type pick-
up head show its 6 components, the distribution of angles during the reflection of ul-
trasonic waves off the surfaces of tubes and a separate design scheme for a head,
which completely encircled the tube to be inspected. General views were also shown of
the device in actual operation. Details of the electronic storage circuit are includ-

                                        UDC: 620.179.16

Card 1/2

L 46715-66

ACC NR: AP6023646

C

ed. Operating procedures are described and test results on tubes of various diameters are presented. Micrographs (100×) illustrate the types of defects discovered by the modified apparatus: lines, cracks and scale-markings--all on internal surfaces. The apparatus was calibrated by forming artificial defects of measurable sizes on the internal surfaces of the tubes and comparing the recorded data with natural defects. Industrial trials at three different plants were successful; the equipment consistently detected flaws as small as 5-7% of the wall thicknesses. Orig. art. has: 9 figures.

SUB CODE: 14,09/   SUBM DATE: 27Sep65/   ORIG REF: 001

Card 2/2   fv

NIKOLAYENKO, A.T.; SEVER?SKIY, V.I.; AN?KHIN, I...?...; S?????, ?.?.

    Ultrasonic control of ???-???-?? ??????? pipe. Defektoskopi?? ?
    no.3:7?-?3 '65.   (MIRA ?8:?)

    1. Ukrain?kiy neu?hno-issledovate?'?kiy rudnyy institut.

TiVERCVSKIY, V. M.
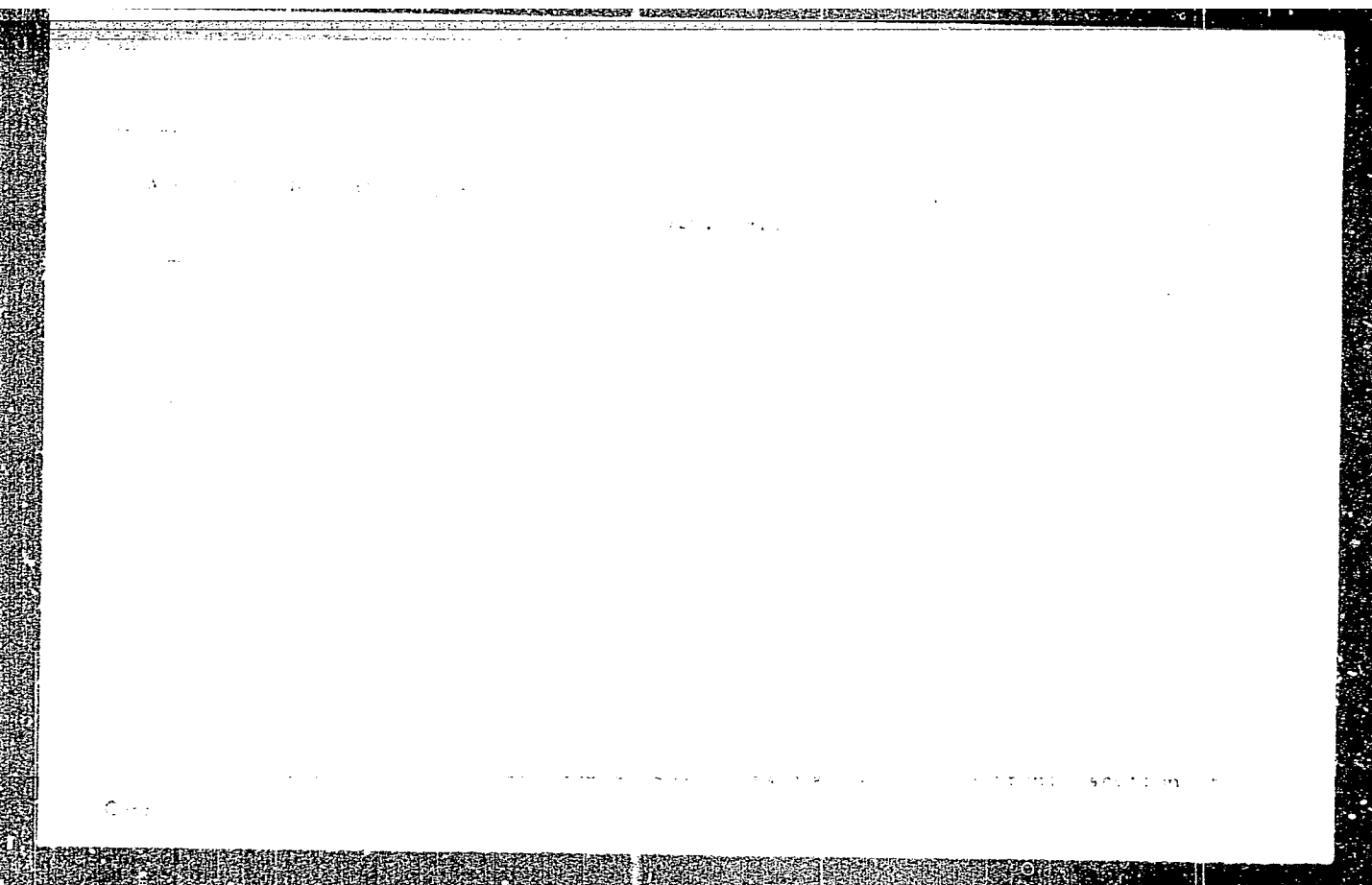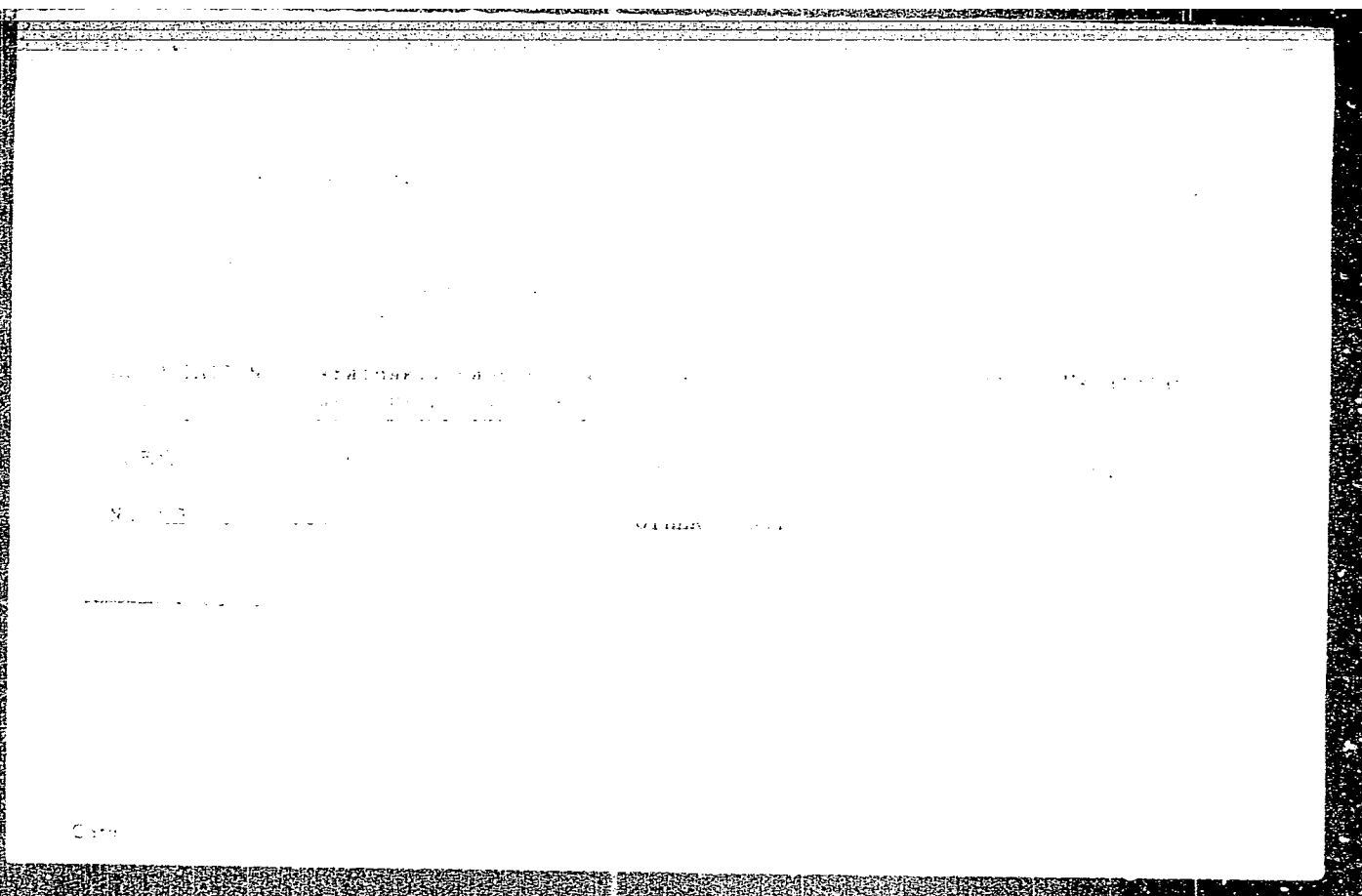
Mbr. Dnepropetrovsk Physico-Technical Inst., -1938-.
"On the Formation of Crystallization Centres in Super-Cooled Liquid: i, "Zhur. Eksper. i Teoret. Fiz., 9, No. 1, 1939.

PETROCHENKO, P.F.; SHAPIRO, I.I.; TEVEROVSKIY, P.A., inzh.; SOLDATOVA, T.I.,
    inzh.; KOZLOVA, V.I., inzh.; MATOVA, A.D., tekhnik; ALEKSEYEV,
    S.A., dotsent, red.; CHERNOVA, Z.I., tekhn.red.

[Time norms established in the general machinery industry for
finishing and cropping operations in iron, steel and nonferrous
metal founding; large-lot and mass production] Obshchemashino-
stroitel'nye normativy vremeni na ochistno-obrubnye raboty pri
proizvodstve chugunnogo, stal'nogo i tsvetnogo lit'ia; krupnose-
riinoe i massovoe proizvodstvo. Moskva, Gos.nauchno-tekhn.izd-vo
mashinostroit.lit-ry, 1959. 57 p.   (MIRA 13:1)

1. MoscoW. Nauchno-issledovatel'skiy institut truda. TSentral'noye
byuro promyshlennykh normativov po trudu. 2. Glavnyy inzhener
TSentral'nogo byuro promyshlennykh normativov po trudu pri Nauchno-
issledovatel'skom institute truda (for Petrochenko). 3. Zavedu-
yushchiy otdelom mashinostroyeniya TSentral'nogo byuro promyshlennykh
normativov po trudu pri Nauchno-issledovatel'skom institute truda
(for Shapiro). 4. Sotrudniki TSentral'nogo byuro promyshlennykh
normativov po trudu pri Nauchno-issledovatel'skom institute truda
(for Teverovskiy, Soldatova, Kozlova, Matova).
                    (Founding--Standards)

TEVEROVSKIY, YE H.

"Coagulation of Particles of an Aerosol in a Turbulent Atmosphere", Izvestiya AN SSSR, Seriya geograf. i geofiz., No 1, 1948 (7-19)

SO: U-3039, 11 Mar 1953

PA 38/49T111

TEVEROVSKIY, YE. N.

USSR/Physics

Condensation

Saturation Curves

Apr 49

"The Dimensions of Condensation Nuclei and the Maximum Possible Supersaturation in Steam Condensation," A. G. Bykov, Ye. N. Teverovskiy, 7 pp

"Zhur Eksper i Teoret Fiz" Vol XIX, No 4

Showed that during steam condensation particles formed on nuclei of molecular size. Minimum size of the nucleus determines maximum possible supersaturation of steam for given temperature. The size saturation of steam for given temperature. The size of the primary particle, depending only on substance's vapor tension may be determined for the maximum

38/49T111

USSR/Physics (Contd)   Apr 49

possible supersaturation for each substance. The greater the vapor tension, the larger the primary particle. Submitted 6 Oct 48.

38/49T111

TEVEROVSKIY, YE. N.

PA 50/49T101

USSR/Physics   Jun 49
     Mechanics of Fluids

"Dimension of the Minimum Pulsations in a Turbulent Stream," M. K. Baranayev, Ye. N. Teverovskiy, E. L. Tregubova, 4 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 5

Magnitudes of true gradients of velocity can be shown to be appreciably greater than average magnitude of maximum gradient of velocity, which is calculated by dissapation of energy in the stream.

Submitted by ACad A. N. Kolomogorov, 14 Apr 49

PA 50/49T101

TEVEROVSKIY, YE. N.

PA 244T63

USSR/Engineering - Hydraulics, Hydraulic   Nov 52
Conveying

"On the Transfer of Heavy Particles Suspended in
Turbulent Flows," Ye. N. Teverovskiy

"Iz Ak Nauk SSSR Otdel Tekh Nauk" No 11, pp 1742-
1749

Reviewing practical applications of hydraulic trans-
fer, states that existing diffusion theory is inac-
curate in its description of process and must be
reconstructed accounting for dependence of turbulent
diffusion coefficient on relation between fall

244T63

velocity of particles and velocity of flow. Ana-
lyzes also gravitation theory of motion of suspended
particles and introduces some corrections, stating
that this theory must take into consideration factor
that work of suspension is done at expense of energy
of flow's turbulent motion.

244T63

TEVEROVSKIY, Ye.N.

Subject   : USSR/Engineering   AID P - 825

Card 1/1   Pub. 78 - 10/26

Authors   : Genkin, M. A., Minskiy, Ye. M., Kozlov, A. L.,
              Teverovskiy, Ye. N. and Shirokov, F. I.

Title   : Cyclonic separator of the VNII (All-Union Scientific
              Research Institute)

Periodical : Neft. khoz., v. 32, #9, 41-43, S 1954

Abstract   : The cyclone type of water and dust particle separation
              from natural gas is described. A spiral deflector without
              moving parts is used for turbulent rotation of gas and a
              180° turn for particle separation. Apparatuses of various
              capacities are outlined on 3 drawings. 2 Russian references
              (1950-1951).

Institution: Scientific Research Institute. Gas Division (NIIOG)

Submitted   : No date

USSR/Chemistry - Gas and air purification   TEVEROVSKIY, Ye.N.   FD-1802

Card 1/1   Pub 50-6/19

Author   : Zaytsev, M. M.; Teverovskiy, Ye. N., Cand Chem Sci

Title   : A high-velocity dust-capturing absorption and heat-exchange apparatus

Periodical : Khim. prom., No 2, 82-87 (18-23), Mar 1955

Abstract   : Describe the operational characteristics of turbulent scrubbers (Venturi
              scrubbers, etc), which can be used for the purification of air and gases
              from dust. The gases are cooled effectively in these scrubbers by reason
              of the great surface of the finely dispersed liquid used for scrubbing.
              Eight references, 2 USSR, both since 1940. Five figures, 2 graphs, 4
              tables.

Institution: Scientific Research Institute of Industrial and Sanitary Gas Purification;
             State Planning Institute of Gas Purification (Giprogazoochistka)

TEVEROVSKIY, Ye.N.; ANDRIANOV, A.P.; MAKAROV, A.I.; AL'PEROVICH, M.A.

"Aerodynamic of industrial apparatus." by I.E. Idel'chik. Reviewed by
Teverovskiy, Ye.N., Andrianov, A.P., Makarov, A.I., Al'perovich, M.A.
Khim. prom. 41 no.3:241 Mr '65.   (MIRA 18:7)

SOV/124-58-8-8955

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 90 (USSR)

AUTHORS: Teverovskiy, Ye.N., Zaytsev, M.M.

TITLE: The High-speed Dust-catching Heat-exchange-type Absorber
            "TP" (Pyleulavlivayushchiy, absorbtsionnyy i teploobmennyy
            apparat "TP" s vysokoskorostnym potokom gaza)

PERIODICAL: Tr. Gos. n.-i. in-ta po prom. i san. ochistke gazov, 1957,
            Nr 1, pp 105-132

ABSTRACT: An examination is made of a dust-catching device char-
            acterized by a very thorough gas-cleaning capacity. The de-
            vice consists of two jointly operating units: The one - a
            nozzle-type liquid atomizer in a Venturi tube; the other - a
            drop collector consisting of a uniflow cyclone. The liquid
            (water) is sprayed into the gas at high velocities (20-150 m/sec),
            the spray droplets measuring from 6 to 65 μ . The article
            includes some theoretical calculations and test data. Biblio-
            graphy: 21 references.
                                                A.V. Kur'yato

Card 1/1

TEVEROVSKIY, YE.N.

112-1-216

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 1, p.34 (USSR)

AUTHOR: Teverovskiy, Ye.N.

TITLE: An Experiment in Operation and Industrial Testing of Various Ash Collectors and Recommendations as to Their Selection (Opyt ekspluatatsii i promyshlennykh ispytaniy razlichnykh zolouloviteley i rekomendatsii po ikh vyboru)

PERIODICAL: Tr.konferentsii po vopr.zoloulavliv., shlakozoloudaleniya i shlakozoloispol'zov., Moscow, Gosenergoizdat, 1955, pp.9-15.

ABSTRACT: NIIOGAZ(State Scientific Research Institute of Gas Purification for Industry and Sanitation), and Giprogazoochistka (State Institute for the Design and Planning of Structures for Gas Purification), made 40 testings of various ash collectors installed for purifying flue gas with a spreader-

Card 1/6

112-1-216

.An Experiment in Operation and Industrial Testing (Cont.)

type of fuel burning of the near-Moscow and Donets Basin coals. During the inspection of ash collectors their extremely low quality of production and installation was exposed. The component parts of battery cyclones in most cases had inadmissibly large clearances between the coiling devices and the frameworks. The depth of the sinking of the coiling devices was not maintained, the hermeticity of the packing of the lower supporting plate and of the upper supporting grid was not provided for, the geometrical dimensions of the input cross sec- tion and of the output helix and of the frameworks and of the exhaust pipes were violated, etc. The operation of ash-collectors was performed inadequately. Hoppers and cyclone parts were found clogged with cinders because of their illtimed unloading, the locks were not hermetic and were unregulated; looseness in the ash-collectors was not eliminated and their surfaces were not insulated. During the testing of the ash-collectors, the initial dust content of gases changed within limits of 0.8 to 8.5

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112-1-216

· An Experiment in Operation and Industrial Testing (Cont.)

grams per normal cu m, depending on the properties of
the fuel, the conditions of operation of the furnace,
the velocity of the gas in the flue, its length and
the degree of its soiling. The total efficiency of the
ash-collector also changed within wide limits because
of the change in the dispersed composition of the
collected cinders. The efficiency of the tested ash-
collectors is presented in the table. The concentra-
tion of suspended matter in gases past the ash-
collectors with a spreader type fuel burning, in

Card 3/6   grams per normal cu m

112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

Type of ash-collector	Near-Moscow coals		Donets Basin coals	
	From tests	From calcu-lations	From tests	From calcu-lations
Cyclone burner Battery	0.2 - 0.7	0.1 - 0.4	0.15 - 0.4	0.1 - 0.25
Cyclone NIIOGAZ	0.2 - 0.6	0.1 - 0.35	0.1 -0.15	0.1 - 0.17
Shutter cinder trap of the VTI (All-Union Heat Engineering Institute im. Dzerzhinskiy)	1 - 2	0.3 - 0.9	—	0.15-0.6

Card 4/6

112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

With the spreader type burning of АРШ (small-size anthra-
cite) the concentration of cinders in the gas past the
shutter type of cinder trap amounted to 0.26 grams per
normal cu m. Divergencies between experimental and
theoretical data are explained by the poor quality of
the manufacturing and installation of the ash-collectors.
Taking into account considerations of economy, efficiency
and operational security of cinder traps for the purifi-
cation of flue-gases, the author advises the installation
of NIIOGAZ cyclones. With limited clearances, it is ad-
visable to install cyclone batteries. A well-timed unloading

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112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

of the deposits from the hopper and the necessary main-
tenance of the apparatus have to be guaranteed. Special
attention should be given to the tightness of the cinder
locks. The use of the shutter type of cinder traps is
limited because of their insufficient efficiency and
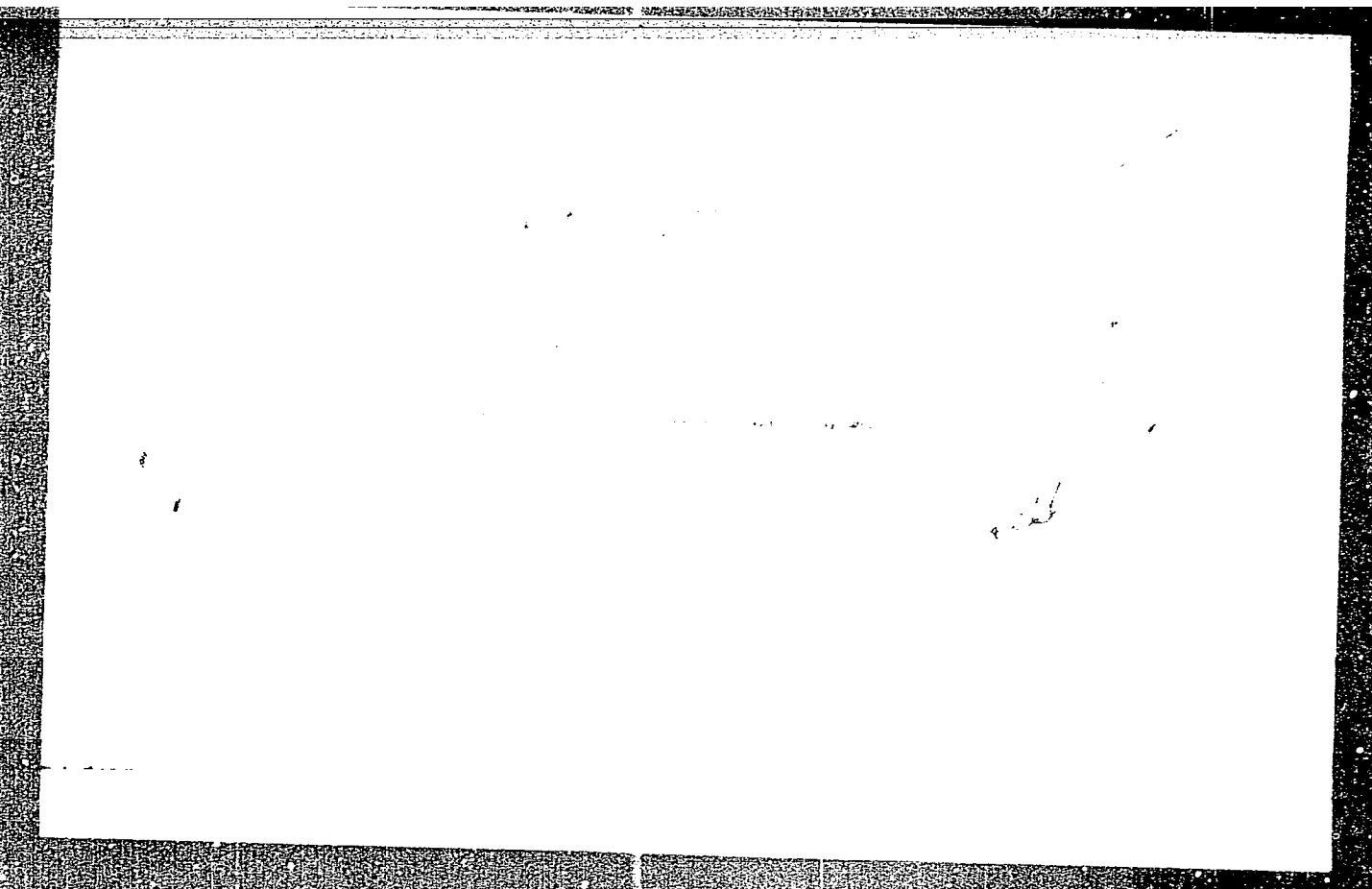lower operational dependability.

N.F.D.

Card 6/6
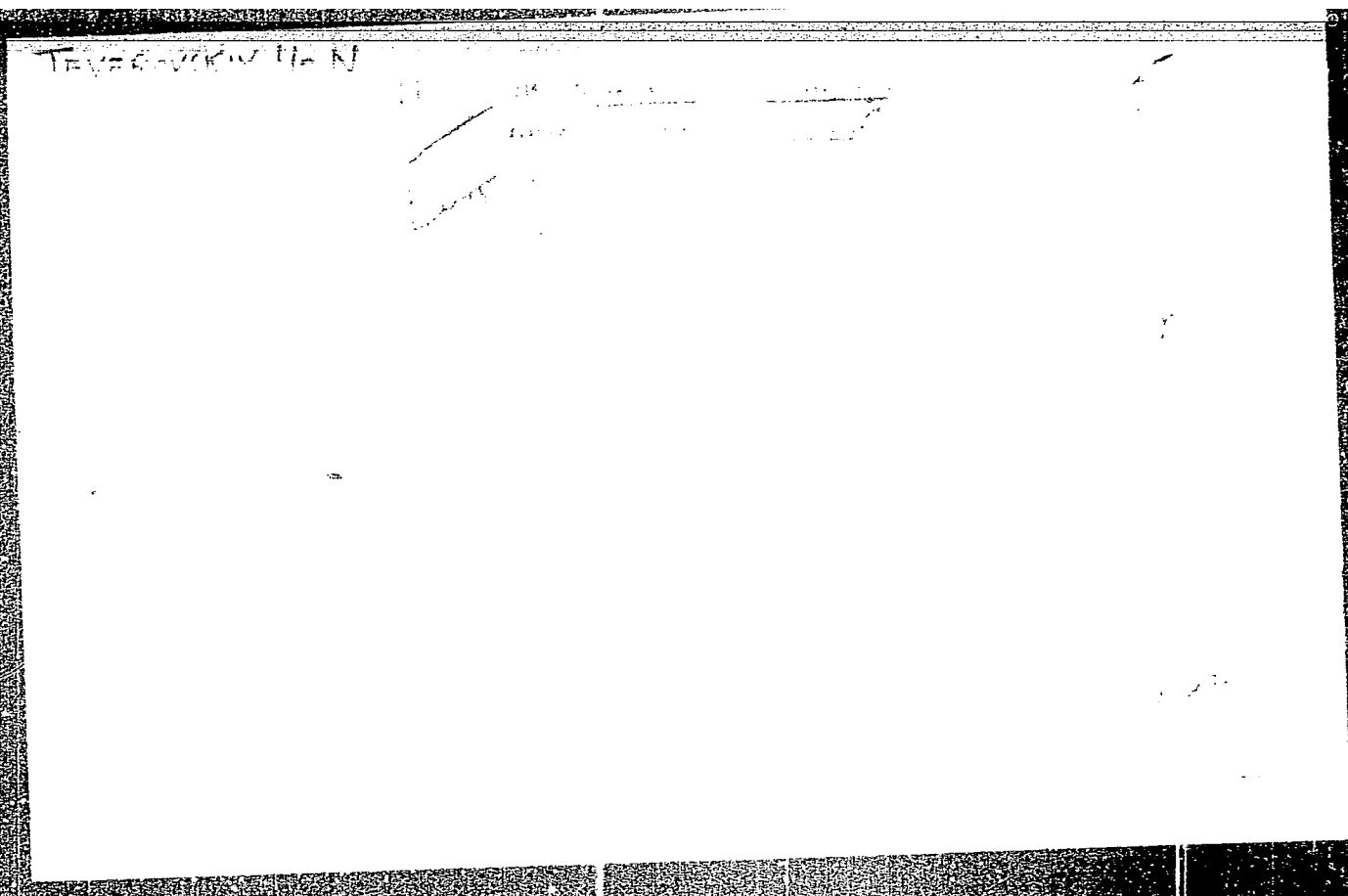
16.9500

77478
SOV/103-21-1-9/22

AUTHOR: Teverovskiy, V. I. (Dnepropetrovsk)

TITLE: On a Particular Case of an Impulse System With
             Variable Pulse Parameters

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 1,
             pp 64-71 (USSR)

ABSTRACT: In the study are considered impulse systems with periodically
             changing parameters. A special case is discussed when
             only one root in the characteristic system equation
             is changing. 1. Link of the First Order. The
             equation of the first order link is given in the
             form:

$$(q - q_0)\, x\,(\bar{t}) = -\, k q_0 f\,(\bar{t}).\qquad (1.1)$$

             where $\bar{t} = t/T$ and $q = pT$ are dimensionless variables,
             and T is the repetitive period of input signals.
Card 1/11   Parameters q_0 and k are variables subordinated to

On a Particular Case of an Impulse System   77478
With Variable Pulse Parameters   SOV/103-21-1-3/22

the following limits:

$$q_0 = q_1$$
$$k = k_1 \qquad a.t \; n \leqslant t \leqslant n + \gamma,$$

$$q_0 = q_1'$$
$$k = k_1' \qquad aT \; n + \gamma < \bar{t} < n + 1$$

here $\quad n = 0, 1, 2, \ldots, \quad \gamma = \frac{\tau}{T}, \quad \tau -$ input pulse duration

and
$$f(\bar{t}) = f[n] \quad at \; n \leqslant \bar{t} \leqslant n + \gamma$$
$$f(\bar{t}) = 0 \qquad at \; n + \gamma < \bar{t} < n + 1$$

Applying the Laplace discrete transformation to Eq.
(1.1) the following transfer function of the first
order impulse system is obtained:

Card 2/11

On a Particular Case of an Impulse System   77478
With Variable Pulse Parameters   SOV/103-21-1-9/22

$$W^{\cdot}(q) = k_1 \frac{(1 - e^{q_1 \gamma}) e^{q_1'(1-\gamma)}}{e^q - e^{q_1 \, cp}}.$$
(1.4)

where:

$$q_{1 \, cp} = q_1 \gamma + q_1'(1 - \gamma).$$

The impulse of system (1.4) at an arbitrary time
is determined from:

denoting $\bar{1} - n = \varepsilon,$ *we obtain*

$$w[n, \varepsilon] = k_1 (e^{-q_1 \gamma} - 1) e^{q_1 \, cp} e^{q_1 \varepsilon} \qquad (0 \leqslant \varepsilon \leqslant \gamma, \ n > 0),$$
(1.5)

$$w[n, \varepsilon] = k_1 (1 - e^{q_1 \gamma}) e^{q_1 \, cp} e^{q_1'(\varepsilon - \gamma)} \qquad (\gamma < \varepsilon < 1, n > 0),$$
(1.6)

$$w[0, \varepsilon] = k_1 (1 - e^{q_1 \varepsilon}) \qquad (0 \leqslant \varepsilon \leqslant \gamma),$$
(1.7)

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$$w[0, \varepsilon] = k_1(1 - e^{q_1 \gamma}) e^{q_1(\varepsilon - \gamma)} \qquad (\gamma < \varepsilon < 1). \qquad (1.8)$$

2. Second Order System. Figure 1 shows the block
diagram of the second order system consisting of two
elements: element 1 with variable parameters and
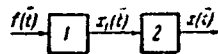element 2 with constant parameters.

Fig. 1.

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This system is described by the following equation:

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With Variable Pulse Parameters

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$$(q - q_{10})\, x_1\, (\bar{i}) = -\, kq_{10}/\, (\bar{i}),\quad (q - q_2)\, x\, (\bar{i}) = -\, q_2 x_1\, (\bar{i}).\qquad (2.1)$$

here $q_2 = \text{const},\ q_{10} = q_1,\ k = k_1'$. when $n \leqslant \bar{i} \leqslant n + \gamma,\ q_{10} = q_1,$
$k = k_1$, when $n + \gamma < \bar{i} < n + 1.$

The discrete transfer function for the astatic
system is obtained in a similar manner as under (1)
in the form:

$$W_a^* (q) =$$

$$= k_1\, \frac{[(q_1' - q_1)\,(1 - e^{q_1\gamma}) + q_1(e^{q_1'(1-\gamma)} - e^{q_1 cp}) + \gamma q_1 q_1']\, e^q}{q_1 q_1'\, (e^q - e^{q_1 cp})\,(e^q - 1)} +$$

$$+ \frac{q_1'\,(e^{q_1 cp} - e^{q_1'(1-\gamma)} - \gamma q_1 e^{q_1 cp})}{q_1 q_1'\,(e^q - e^{q_1 cp})\,(e^q - 1)}.\qquad (2.13)$$

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In the very important case when $\gamma \ll 1$ Eq. (2.13) is simplified into:

$$W_2^{\cdot}(q) = k_1 \frac{\gamma q_1 q_2 (e^{q_1} - e^{q_1}) e^q}{(q_1 - q_2)(e^q - e^{q_1} r) (e^q - e^{q_1})}. \qquad (2.14)$$

3.   System of an arbitrary order with one variable root of the characteristic equation. A system of any r-th order is taken. All roots of the characteristic equation are simple, with only one root changing. This system may be shown as a series connection of two elements: (Fig. 2) the variable element 1 and the element 2 described by equation of the (r-1)-th order.
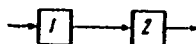
Card 6/11   Fig. 2.

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The transfer function of the 1st link is given in the form:

$$W_1(q) = -k_1 \frac{q_{10}}{q - q_{10}}, \qquad (3.1)$$

where q_{10} is a variable root having q_1 and q_1' magnitudes. The transfer function of the constant 2nd link is:

$$W_{r-1}(q) = \frac{P(q)}{Q(q)}, \qquad (3.2)$$

where $Q(q)$ and $P(q)$ are polynomials with respect to q, with the order of $P(q)$ lower than the order of $Q(q)$. Then Eq. (3.2) is transformed as follows:

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$$W_{r-1}(q) = \frac{P(q)}{Q(q)} = \sum_{k=1}^{r-1} \frac{P(q_k)}{Q'(q_k)} \frac{1}{q - q_k} = \sum_{k=1}^{r-1} \frac{c_k}{q - q_k},\qquad (3.3)$$

where q_k - are roots of equation $\quad Q(q) = 0, \quad Q'(q_k) = \frac{dQ(q)}{dq}\Big|_{q=q_k}.$

On the basis of Eq. (3.3) the block diagram of the
system is transformed into the form shown on Fig.
3a.
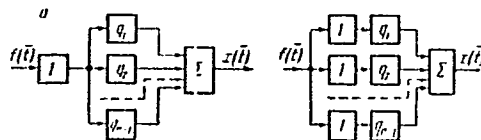
Fig. 3.

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On a Particular Case of an Impulse System   77478
With Variable Pulse Parameters   SOV/103-21-1-9/22

On this Figure q_1, q_2,...,q_{r-1} are links, the
transfer functions of which represent the components
of the sum (3.3); $\sum$ is a summation device. Figure
3b shows a system in which the processes proceed in
a similar manner as in system shown on Fig. 3a. The
discrete transfer function of this system is given in
the form:

$$W^{\cdot}(q) = \sum_{k=1}^{r-1} c_k W_k^{\cdot}(q), \qquad (3.4)$$

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where

$$W_k^*(q) = -\frac{1}{q_k} \frac{b_{1k} e^q + b_{0k}}{(e^q - e^{q_{1cp}})(e^q - e^{q_k})},$$

$$b_{1k} = \frac{q_1(q_k - q_1') e^{q_k} + q_k(q_1' - q_1) e^{q_k(1-\gamma)+q_1\gamma}}{(q_1 - q_k)(q_1' - q_k)} +$$

$$+ \frac{q_k(q_1 - q_k) e^{q_{1cp}} + (q_1 - q_k)(q_1' e^{q_k(1-\gamma)} - q_k e^{q_1'(1-\gamma)})}{(q_1 - q_k)(q_1' - q_k)},$$

$$b_{0k} = e^{q_{1cp}+q_k} + \frac{q_k e^{q_k + q_1(1-\gamma)} - q_1 e^{q_{1cp}+q_k(1-\gamma)}}{q_1 - q_k}. \qquad (3.5)$$

A brief discussion of the result obtained is given.
The application of this method is given to the
analysis of the transient states in the radio location
auto rangefinder. The analysis is made for a
simplified arrangement. The operation of the

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auto rangefinder is based on the comparison of the
position of the impulse reflected from the target
with the position of a pair of special selective
impulses. These impulses are made to follow the
displacement of the echo impulse. The assistance
of Ya. Z. Tsypkin is acknowledged. There are 6 figures;
and 5 Soviet references.

SUBMITTED: February 26, 1959

Card 11/11

TEVEROVSKIY, Ye.N.

"Opyt Ckspluatatsii i promyshlennykh Ispytaniy Razlichnykh Zolouloviteley i Rekomendatsii po ikh Vyboru," Proceedings of a Conference on Problems of Ash Removal, Ash and Slag Removal, and Ash and Slag Utilization. (Trudy Konferentsiya Po Voprosam Zoloulavlivaniya, Shlakozoloulavlivaniya I Shlarozoloispol'sovaniya. U.S.S.R. , Gosenergoizdat (Moscow: Gosenergoizdat, 1955, 160pp.; abstr. in Teploenergetika (Heat Pwr Engng, Moscow), June 1956, 64). There are ten papers on atmospheric pollution, flue gas cleaning, cyclones, instrumentation, pneumatic removal of ash, ash handling, and the use of ash for heat insulation and construction.

ANDRIANOV, A.P.; ZAYTSEV, M.M.; IDEL'CHIK, I.Ye.; POPOV, D.D.[deceased];
    TEVEROVSKIY, Ye.N.; UZHOV, V.N.; CHUMAK, L.I.; SHAKHOV, G.F.;
    SHIROKOV, F.A.; TOMCHINA, Ye.I., red.; ZAZUL'SKAYA, V.F., tekhn.
    red.

[Battery cyclones; instructions for designing, assembling, and
operating] Batareinye tsiklony; rukovodiashchie ukazaniia po
proektirovaniiu, montazhu i ekspluatatsii. 2. izd. Moskva, Gos.
nauchno-tekhn.izd-vo khim. lit-ry, 1959. 103 p. (MIRA 15:1)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.
                 (Separators (Machines))

VOVK, V.G., inzh.; POLEZHAYEV, A.A., kand.tekhn.nauk; PYLOV, B.A., kand.
    tekhn.nauk; TEVEROVSKIY, Yu.N., inzh.

Universal braking unit for studying machine transmissions.
Stroi.i dor.mash. 6 no.8:18-21 Ag '61.   (MIRA 14:8)
                    (Machinery—Transmission devices)

TEVESZ, F.

Five-tube superband. p. 272.
Vol 5, no. 12, Dec. 1955. RADIOTECHNIKA, Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

TEVESZ, F.

TEVESZ, F. The 50-watt amateur transmitter. p. 18.

Vol. 6, No. 1, Jan. 1956.
RADICTECHNIKA
TECHNOLOGY
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

TEVESZ, F.

Modulation index. p.72.
RADIOTECHNIKA. (Magyar Onkentes Honvedelmi Szovetseg) Budapest.
Vol 6, no. 3,Mar 1956.

SOURCE: EEAL, Vol 5, No. 7, July 1956.

$7 c i$ $/l. S$

USSR / Farm Animals. Reindeer.   Q-3

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105740.

Author : Mityushev, P. V., Tevi, A. S.
Inst   : Not given.
Title   : Dependence of the Quality of "Panty"* on Methods
          of Their Conservation.

Orig Pub: Karakulevodstvo i averovodstvo, 1957, No 6,
          33-36.

Abstract: The method of preservation of "panty" by the use
          of which their extract exerts the most effective
          therapeutic action on wounds should be consider-
          ed the best. Different methods of preserving
          "panty" are compared and evaluated.

          *[Panty are non-ossified antlers of Cervus elaphus
             sibiricus and of some other cervids from which pharmacol-
             egical preparations are produced for use in various
  Card 1/1   diseases]

PROCESSES AND PROPERTIES INDEX

Cement from Kerch Iron and Steel Works blast-furnace slags. A. G. Tevfikov. *Tsement 6*, No. 4/5, 57-9(1939).
E. E. Stefanowsky

A S H - I L A METALLURGICAL LITERATURE CLASSIFICATION

L 22134-66   EWT(1)

ACC NR: AP6004937

SOURCE CODE: UR/0056/66/050/001/0199/0201

43

41

B

AUTHOR: Gol'dman, I. I.; Tevikyan, R. V.

ORG: Physics Institute GKAE, Yerevan (Fizicheskiy institut GKAE)

TITLE: Conservation laws for free fields [2]

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 1, 1966, 199-201

TOPIC TAGS: group theory, electromagnetic field, mathematic transformation, quantum field theory, motion equation

ABSTRACT: In connection with a new relation, having the form of a conservation law of a certain tensor composed from the electromagnetic fields, recently derived by D. M. Lipkin (J. Math. Phys. v. 5, 696, 1964) and later generalized by T. A. Morgan (ibid. p. 1659), the authors point out that these relations were proved by directly using Maxwell's equation, and that the group-theoretical nature of these new conservation laws remains unexplained. They therefore show that the usual equations of motion for the free fields can be obtained by variation of some nonlocal Lagrangian. The type of nonlocality remains to a large extent arbitrary. The relations of Lipkin and Morgan and some other relations are shown to be the con-

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L 22134-66

ACC NR: AP6004937

2

sequence of the invariance of the action integral under the transformations of the group. In this formalism it is immaterial whether the mass of the field particle is zero or nonzero. The results obtained can be generalized to the case of an arbitrary free field. The nonlocal transformations in question form a group. The authors thank A. Ts. Amatuni and V. A. Dzhrbashyan for their interest in the problem and discussions. Orig. art. has: 19 formulas.

SUB CODE: 20,12/ SUBM DATE: 22Jul65/   OTH REF: 003

Card 2/2 BK

L 33555-66   PET(1)   IJF(c)   GG

ACC NR: AFC014030   SOURCE CODE: UR/0056/66/050/004/0911/0914

AUTHOR: Tevikyan, R. V.

ORG: Physics Institute, GKAE, Yerevan (Fizicheskiy institut GKAE)

TITLE: Quantum theory of a particle with electric and magnetic charges

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 911-914

TOPIC TAGS: quantum theory, spinor, parity principle, CHARGED PARTICLE

ABSTRACT: The author develops a quantum theory for a spinor particle possessing simultaneously electric charge e and scalar magnetic charge g, the magnitudes of the electric and magnetic charges being arbitrary. It is shown that the theory developed by N. Cabibbo and E. Ferrari (Nuovo Cim. v. 23, 1146, 1962) is in error. Mandelstam's formulation of quantum electrodynamics without a potential (Ann. of Phys. v. 19, 1, 1962) is used for the description of the particles. In this theory P and T parity is not conserved, although P and T parity is conserved if g is regarded as a pseudoscalar. If the operation M (conjugation of the magnetic charge) is introduced, then the theory is invariant against MCPT transformation. It is concluded that the available experimental data do not exclude the possibility that all particles have a small magnetic charge besides the electric charge. Orig. art. has: 17 formulas.

SUB CODE: 20/   SUBM DATE: 27May65/   OTH REF: 004

Card 1/1

ARUTYUNAYAN, V.M.; VARTANYAN, Yu.L.; CHUBARYAN, E.V.; SHAKHBAZYAN,
     V.A.; AMATUNI, A.TS.; DZHRBASHYAN, V.A.; MELIK-BARKHUDAROV,
     T.K.; TEVIKYAN, R.V.; BERESTETSKIY, V.B., prof., red.;
     SHTIBEN, R.A., red. izd-va; KAPLANYAN, M.A., tekhn. red.

[Problems in the theory of strong and weak interactions of
elementary particles; lectures] Voprosy teorii sil'nykh i
slabykh vzaimodeistvii elementarnykh chastits; lektsii. Pod
obshchei red. V.B.Berestetskogo. Erevan, Izd-vo Akad. nauk
Armianskoi DDR, 1962. 190 p.   (MIRA 15:5)

1. Akademiya nauk Armyanskoy SSR. Fizicheskiy institut.
                    (Nuclear reactions)

AUTHOR: Tevikyan, R. V.

TITLE: Spectral representation of matrix elements

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
              no. 3, 1962, 779 - 782

TEXT: The integral Dyson representation (Phys. Rev. 110, 1460, 1958) is
generalized on basis of the Schwinger and Gribov methods (V. N. Gribov,
ZhETF, 34, 1310, 1958), and spectral representations are derived for the
matrix element of the product of n scalar Heisenberg operators. For
three components $F_{123}^{(-)}(x_{12}, x_{23}) = \langle 0| \varphi_1(x_1)\varphi_2(x_2)\varphi_3(x_3)| 0\rangle$, $x_{ik} = x_i - x_k$,

$$F_{123}^{(-)}(x_{12}, x_{23}) = (2\pi i)^9 \int_0^\infty D^{(-)}(x_{12}, \varkappa_{12}) D^{(-)}(x_{13}, \varkappa_{13}) D^{(-)}(x_{23}, \varkappa_{23}) \times \qquad (7)$$

$$\times I_{123}(\varkappa_{12}^2, \varkappa_{13}^2, \varkappa_{23}^2) \, d\varkappa_{12}^2 \, d\varkappa_{13}^2 \, d\varkappa_{23}^2;$$

$$D^{(-)}(x, m) = \frac{i}{(2\pi)^3} \int e^{ikx} \theta(-k^0) \delta(k^2 - m^2) dk.$$

is obtained. For n -
components

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Spectral representation ...

$$F_{12...n}(x_{12}, x_{23}, \ldots, x_{n-1,n}) = \langle P | \varphi_1(x_1 - \bar{x}) \varphi_2(x_2 - \bar{x}) \ldots \varphi_n(x_n - \bar{x}) | Q \rangle',\qquad (14),$$

$$\bar{x} = (x_1 + x_2 + \ldots + x_n)/n,$$

$$F_{12...n}(x_{12}, x_{23}, \ldots, x_{n-1,n}) =$$

$$= (2\pi i)^{3n(n-1)/2} \int_0^\infty D^{(-)}(x_{12}, \varkappa_{12}) D^{(-)}(x_{13}, \varkappa_{13}) \ldots D^{(-)}(x_{n-1,n}, \varkappa_{n-1,n}) \times$$

(15) is obtained with

$$\times I_{12...n}(\varkappa_{12}^2, \varkappa_{13}^2, \ldots, \varkappa_{n-1,n}^2, x_{12}, x_{23}, \ldots, x_{n-1,n}) \, d\varkappa_{12}^2 d\varkappa_{13}^2 \ldots d\varkappa_{n-1,n}^2,$$

Card 2/4

Spectral representation ...

$$T_{12\ldots n}(x_{12}^2, x_{13}^2, \ldots, x_{n-1,n}^2, u_1, u_2, \ldots, u_{n-1}) \neq 0$$

$$x_{12} + x_{13} + \ldots + x_{1n} \geqslant \max\{0, m_{12\ldots n}^{12} - \sqrt{([(n-1)P+Q]/n + u_1)^2}\},$$

$$x_{1\cdot} + x_{14} + \ldots + x_{1n} + x_{23} + x_{24} + \ldots + x_{2n} \geqslant$$
$$\geqslant \max\{0, m_{12\ldots n}^{23} - \sqrt{([(n-2)P+2Q]/n + u_2)^2}\}, \qquad (16).$$

$$\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$$

$$x_{1n} + x_{2n} + \ldots + x_{n-1,n} \geqslant \max\{0, m_{12\ldots n}^{n-1,n} - \sqrt{([P+(n-1)Q]/n + u_{n-1})^2}\},$$
$$[(n-1)P+Q]/n + u_1, \quad [(n-2)P+2Q]/n +$$
$$+ u_2, \ldots, [P+(n-1)Q]/n + u_{n-1} \in L^+.$$

There are 3 references: 1 Soviet and 2 non-Soviet. The two references
to English-language publications read as follows: T. Schwinger. Proc.
of Seventh Rochester Conference on High Energy Phys., 1957, ses. IV, p. 1,
F. Dyson. Phys. Rev. 110, 1460, 1958.

ASSOCIATION: Fizicheskiy institut Akademii nauk Armyanskoy SSR (Physics
Institute of the Academy of Sciences, Armyanskaya SSR)

Card 3/4

Spectral representation ...

S/056/62/042/003/022/049
B102/B138

SUBMITTED: July 3, 1961

Card 4/4

TEVIKYAN, R.V.

Spectral representations of matrix elements. Zhur.eksp.i teor.
fiz. 42 no.3:779-782 Mr '62. (MIRA 15:4)

1. Fizicheskiy institut AN Armyanskoy SSR.
(Matrix mechanics) (Operators (Mathematics))

TEVIKYAN, R. V. Cand Phys-Math Sci ** (diss) "On the Block-Nordsick approximation

in Green's theory of functions. Improvement of formulas of the theory of

disturbances." Mos, 1958. 11 pp (Mos Order of Lenin and Order of Labor

Red Banner State Univ im M. V. Lomonosov), 120 copies. Biblipgraphy at end

of text (15 titles), (KL, 11-58, 112)

-13-

TEVIKYAN, R.V.

π-electron Green's function in Bloch-Nordsieck approximation. Zhur.
eksp. i teor. fiz. 33 no.5:1304 N '57.   (MIRA 11:3)

1. Fizicheskiy institut AN ArmSSR.
        (Potential, Theory of) (Electrons)

TEVIKYAN, K. V.

AUTHOR: Tevikyan, R. V.,   56-2-23/47

TITLE: Note on the Improvement of Perturbation Theory Formulae (Ob
            uluchshenii formul teorii vozmushcheniy)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 2(8),
            pp. 478-480, (USSR)

ABSTRACT: In the paper under consideration a method described earlier is ap-
            plied to the investigation of the Compton effect and of the scat-
            tering of an electron and of a positron at an electron in the case
            of great energies, taking into consideration the polarization of
            the vacuum. A transformation of the generalized vertex part and of
            the green functions for two electrons must be added to the group
            of finite transformations for the renormalized kernels. With the
            use of these transformations funcional equations for the green
            functions can be obtained. A formula is also given for the green
            function of the photon, as well as for the generalized vertex part
            for the Compton effect in the range of great energies. Subsequently
            the radiation corrections for the Compton effect are computed. The
            differential cross section for the n-fold Compton effect with an
            emission of an arbitrary number of long wave photons is given and
            discussed. Finally the author discusses the scattering of an elec-
            tron on an electron and gives differential cross-sections for a
            number of special eases. (There are no figures and no references).

Card 1/2

Note on the Imppovement of Perturbation Theory Formulae.   56-2-23/47
ASSOCIATION: Yerevan State University a (Yerevanskiy gosudarstvennyy universitet)
SUBMITTED: February 2o, 1957

Card 2/2

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AUTHOR: Tevikyan, R.V.   56-5-41/46

TITLE: Green's n-Electron Function in the Bloch-Nordsieck Approximation
(n-elektronnaya funktsiya grina v priblizhenii Blokha-Nordsika)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 5,
pp. 1304-1304 (USSR)

ABSTRACT: On the basis of the results obtained by Schwinger (ref.1) for
Green's n-electron function a new way of writing for G_n is intro-
duced, after the matrix $\gamma \mu$ was replaced by o-numbers. An exact
solution is given for the G_n as well as the G_{1n}-equation. The prob-
ability of radiation of n-photons of low energy can be expressed
by Poisson's equation. There are 3 references, 1 of which is Slavic.

ASSOCIATION: Physics Institute of the AN Armenian SSR (Fizicheskiy institut
Akademii nauk Armyanskoy SSR)

SUBMITTED: July 5, 1957

AVAILABLE: Library of Congress

Card 1/1

TEVFIKOV, A.G.

Sulfite bleaching of multicolored zephyr yarn. Tekstil'. Prom. 12, No.11, 39 '52.
(MLRA 5:11)
(CA 47 no.22:12822 '53)

1. TEVFIKOV, A. G.

2. USSR (600)

4. Cotton Finishing

7. Sulfite method for bleaching colored zephyr cloth, Tekst. prom., 12,
    No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, __February__ 1953. Unclassified.

Obtaining hydraulic lime from marls near Bakhtchis-sarai. A. O. Tevŝŝkov. *Prom. Stroitel. Material.* 1940, No. 3, 89–01; *Chem. Zentr.* 1940, II, 1006.—Lime marl deposits of Bakhtchisaarai (Krim) and their use for the manuf. of solid hydraulic lime are described. Tables show the chem. compn. of the crude and finished products, firing and slaking conditions and strength of test pieces after different periods of storing. The material must be fired in a revolving furnace because the material dissoc. easily.

M. V. Condolde

TEVI, A. S.

35479. Opyt lecheniya revmatizma i ishialgii pchelinym vzhaleniem. Pchelovodstvo,
1949, No. 11, s. 55-56.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

TEVIKYAN P.V.

56-6-13/56

AUTHOR   TEVIKYAN, R. V.
TITLE   GREEN'S Function for Two Electrons in the Approximation
              by BLOCH-NORDSICK.
              (Dvukhelektronnaya funktsiya Grina v priblizhenii Blokha-
              Nordsika. - Russian)

PERIODICAL   Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 32, Nr 6,
              pp 1573-1574 (USSR)

ABSTRACT   At first SCHWINGER'S equation for GREEN'S function of
              two electrons in BLOCH-NORDSICK'S approximation is ex-
              plicitly written down, and the equation for GREEN'S
              function of an electron is added. Next, the solution
              ansatz for the equation of the two-electron function is
              written down. For the purpose of solving the equation for
              G_{12}, the author used the same method as used in a previous
              work. This equation for G_{12} is then also written down for
              the momentum space and is solved by means of FOK'S method
              of eigentime; the solution is also written down explicitly.
              No polarization of the vacuum exists in BLOCH-NORDSICK'S
              approximation; the relations resulting therefrom are given.
              After some computing the following is found:

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GREEN'S Function for Two Electrons in the Approximation by BLOCH-NORDSICK.

$$= i \int_0^\infty d\nu\, e^{-\varepsilon\nu}\, e^{-i(m-up_1)\nu}\, +f(\nu)\, \exp\left\{ -\sqrt{4\pi}\frac{e u^\mu}{(2\pi)^2} \right.$$

$$\left. \int \frac{e^{-i(up)\nu}}{(up)} -i \quad A_\mu (p)dp \right\}$$

The divergences contained in the function G_{12} are eliminated by renormalization. By means of the method discussed here also GREEN'S functions of three or more electrons in the approximation by BLOCH-NORDSICK can be determined, but then rather complicated expressions are obtained. (No Illustrations)

ASSOCIATION: State University YEREVAN (Yerevanskiy gosudarstvennyy universitet.- Russia)

PRESENTED BY: –

SUBMITTED: 20.2. 1957.

AVAILABLE: Library of Congress.

CARD 2/2

TEVIKYAN, R.V.

56-6-42/56

AUTHOR: TEVIKYAN,R.V.

TITLE: GREEN'S Function in Scalar Electrodynamics in BLOCH-NORDSICK Approximation. (Funktsiya Grina v skalyarnoy elektro-dinamike v priblizhenii Blokha-Nordsika, Russian) Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 6, p 1575-   (U.S.S.R.)

ABSTRACT: The present paper investigates GREEN'S function of scalar electrodynamics in BLOCH-NORDSICK approximation by a method already previously employed. This method entails disregarding the recoil of the particle. On this occasion, as is known, no infrared catastrophe occurs. First, an equation for GREEN'S function on scalar electrodynamics is given. By making use of the invariance of GREEN'S function with respect to translation, the aforementioned equation is written down first in momentum representation and then in the BLOCH-NORDSICK approximation. Also GREEN'S function of the photon is written down in this approximation. The BLOCH-NORDSICK equation is rigorously solved by FOK'S method of eigentime. On this occasion the terms containing the auxiliary mass M are removed by renormalization. The renormalized GREEN'S function

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56-6-42/56

GREEN'S Function in Scalar Electrodynamics in BLOCH-NORDSICK Approximation.

is then explicitly written down and with the help of this GREEN'S function the probability of the following process is computed: A particle is scattered in an exterior field; on this occasion it radiates any number of long-wave photons and n-photons with energies that are ranged within a certain interval. (No Illustrations).

ASSOCIATION: State University of Yerevan. (Yerevanskiy gosudarstvennyy universitet)
PRESENTED BY:
SUBMITTED: 20.2.1957
AVAILABLE: Library of Congress

Card 2/2

IE V I AYII ICI I. U.

Category : USSR/Theoretical Physics - Quantum Electrodynamics   B-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 2944

Author   : Tevikyan, R.V.
Title   : The Solution of the Schwinger Equations in the Bloch-Nordsieck Model.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 5, 949-951

Abstract : A method for the approximate solution of the Dirac equation, proposed
           by Bloch and Nordsieck (Bloch F., Nordsieck, A., Physical Review, 1937,
           52, 54) for the solution of the problem of the scattering of an electron
           in an external field, which is valid in the region of small momenta,
           is used for an approximate solution of equations for the single-elec-
           tron Green's function. The zero approximation of this method, which is
           the only one considered by the author, consists of replacing the γ^α
           matrices in the original equation by the c-numbers u^α ($\alpha = 0$, 1, 2, 3),
           after which the equation is solved rigorously. The final expression
           is given for the renormalized Green's function, which in the particular
           case when there is no source is analogous to the expression obtained
           by A.A. Abrikosov (Referat Zh. Fizika, 1955, 15691).

Card   : 1/1

TEVI, A.S.

Mar 49

41/49T65

USSR/Medicine - **Honey**
   Medicine - Wounds, Therapy

"The Therapeutic Significance of Honey," Prof
D. M. Rossiyskiy, Hon Worker of Sci, A. S. Tevi,
1 p

"Fel'dsher i Akusherka" No 3

Honey was used with good results in treating
wounds and dystrophic cases during World War II.
Dressings saturated with honey were used in a
number of hospitals and clinics and produced good
therapeutic results by accelerating regeneration
and inhibiting pathogenic processes. Many

FDB

41/49T65

Mar 49

USSR/Medicine - Honey (Contd)

Moscow therapeutic institutes are using honey
for gastric and duodenal tumors.
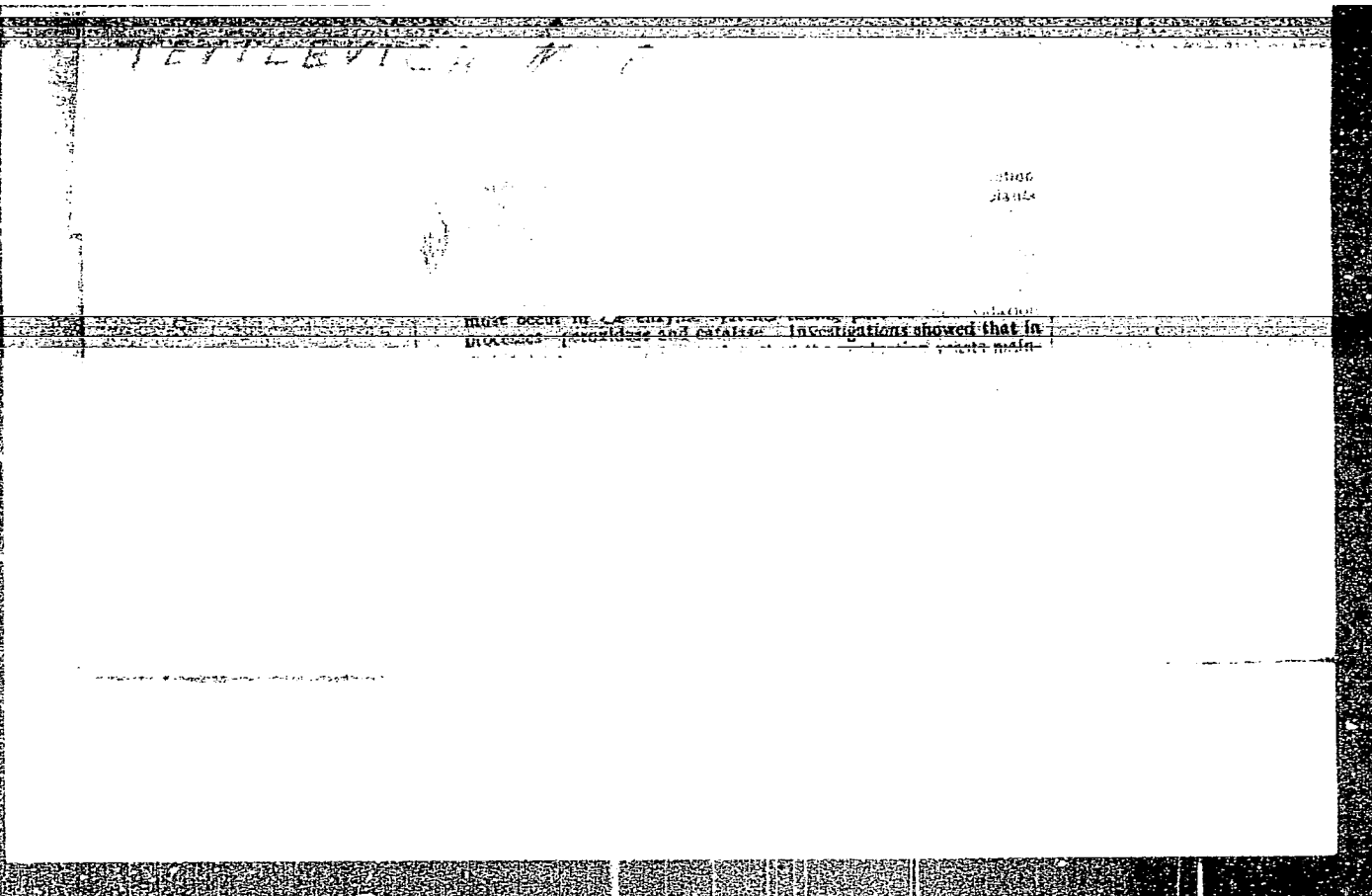
FDB

NEPOMNYASHCHA, M.L.; MEDVINS'KA, L.Yu.; TEVILEVICH, M.B.

Secondary phagoresistant cultures of Streptococcus lactis.
Mikrobiol.zhur. 15 no.2:56-66 '53.   (MLRA 7:3)

1. Z Institutu mikrobiologii AN URSR.
                        (Streptococcus lactis) (Bacteriophagy)

must occur in an enzyme systems being processes peroxidase and catalase investigations showed that in

TEVILEVICH, M. D.

NEPOMNYASHCHA, M.I.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation by Str. lactis in milk. Report No.1:Vitamin B complex requirements of Streptococcus lactis. Mikrobiol. zhur. 17 no.1:28-34 '55   (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR
        (VITAMIN B COMPLEX, metabolism,
            Streptoc. lactis in lactic fermentation, seasonal
            variations) (Uk)
        (STREPTOCOCCUS,
            lactis, seasonal variations in lactic fermentation &
            vitamin B complex requirement) (Uk)
        (MILK, microbiology,
            Streptoc. lactis, seasonal variations in vitamin B
            complex requirement) (Uk)

NEPOMNYASHCHA, M.L.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation by Str. lactis in milk. Report No.2: Vitality of Streptococcus lactis in milk in various seasons. Mikrobiol. zhur. 17 no.1:35-40 '55   (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR.
    (STREPTOCOCCUS,
        lactis, vitality in milk in various seasons) (Uk)
    (MILK, microbiology,
        Streptoc. lactis, vitality in various seasons) (Uk)

NEPOMNYASHCHA, M.L.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation of milk. Report
No.3: Selection of Str. lactis culture with low degree of
sensitivity to seasonal variations in the composition of milk.
Mikrobiol. zhur. 17 no.2:11-18 '55   (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR.
        (STREPTOCOCCUS,
            lactis, cultures resist. to seasonal variations of milk
            composition) (Uk)
        (MILK, microbiology,
            Streptoc. lactis, cultures resist. to seasonal variations
            of milk composition) (Uk)

TEVILEVICH, M. B.

USSR/Chemical Technology.   Chemical Products and Their Application -- Fermentation
                            industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6472

     Author: Nepomnyashchaya, M. L., Medvinskaya, L. Yu., Karpenko, M. K.,
               Tevilevich, M. B.

Institution: None

     Title: Some Biological Properties of Production Yeast on Operation in
              Accordance with the Withdrawal Method

   Original
Publication: Spirt. prom-st', 1955, No 3, 29-30

   Abstract: A number of plants have been operating according to the method uti-
              lizing fermenting mash in lieu of yeast, which had been proposed by
              Orlovskiy, Ya. K. (Referat Zhur - Khimiya, 1955, 53936). To deter-
              mine changes in biological properties of withdrawn yeast, after its
              prolonged utilization, detailed tests have been conducted, the re-
              sults of which have revealed that withdrawn yeast adapts itself to
              the new conditions and, in the absence of infection, exhibits a high

Card 1/2

USSR/Chemical Technology. Chemical Products and Their Application -- Fermentation
                               Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6472

Abstract: and almost equal rate of fermentation during all of its stages.
          This indicates that under manufacturing conditions there takes
          place a selection of yeasts best adapted for the withdrawal method.

Card 2/2

TEVILYEVICH, M.B.

Determining catalase and peroxidase in commercial yeast Saccharomyces cerevisiae (race No. 12) from distilling plants using inoculum. Mikrobiol. zhur. 17 no.4:25-29 '55
(MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR
(YEAST) (CATALASE) (PEROXIDASES)

NEPOMNYASHCHAYA,M.L.;MEDVINSKAYA,L.Yu.; KARPENKO,M.K.; TEVILEVICH,M.B.

Biological characteristics of distillers' yeast in connection with using the yeast transfer method. Spirt.prom.21 no.3:29-30 '55.

1. Institut mikrobiologii imeni akademika Zabolotnogo (MLRA 8:12)

(Yeast)

TEVILEVICH, M.B. [Tevilevych, M.B.)

Fermenting force of Streptococcus lactis cultures on milk during various seasons of the year. Mikrobiol. zhur. 20. no.4:13-18'58.

(MIRA 16:8)

1. Institut mikrobiolgoii AN UkrSSR.
    (STREPTOCOCCUS LACTIS)   (MILK--BACTERIOLOGY)

TEVILEVICH, M.B.

     Vitamin reguirements and synthesis of certain B vitamins in cultures
of Streptococcus lactis. Trudy Inst. mikrobiol. no. 6:80-86 '59.
                                        (MIRA 13:10)

1. Institut mikrobiologii AN USSR.
            (LACTIC ACID BACTERIA)   (VITAMINS—B)

KVASNIKOV, Ye.I. [Kvasnykov, IE.I.]; TEVILEVICH, M.B. [Tevilevych, M.B.];
    SLYUSARENKO, T.P.

    New stimulant of the reproduction of baker's yeast cultivated on sugar
    beet molasses. Mikrobiol. zhur. 26 no.5:3-8 '64.   (MIRA 18:7)

    1. Institut mikrobiologii i virusologii AN UkrSSR.

TEVIS, P. I.

FDD

USSR/Electricity - Furnaces, Electric   Apr 51

"Electric Furnace Unit for Light Alloys," P. I. Tevis,
S. D. Belov, Engineers

"Elektrichestvo" No 4, pp 65, 67

Authors propose method for treating light alloys in
elevated elec furnace units which would do away with
saltpeter baths now used. Latter are very dangerous
from fire standpoint and also very expensive. Harden-
ing, annealing, and aging are all carried out in the
unit.   One such unit for hardening, annealing and
aging of alloy V-95 with inside dimensions 6,400 x
1,200 x 1,000 has been operating at mach-bldg plant

FDD   178T59

USSR/Electricity - Furnaces, Electric   Apr 51
                  (Contd)

since Jun 49. Authors were awarded 2d prize in All-
Union Sci and Tech Soc of Power Engineers' 1949 com-
petition for elec power econ. Submitted 29 Dec 50.

178T59

TEVIS, P. I.

"Electric Furnace Unit for Light Alloys," Élektrichestvo, No. 4, 1951.
All-Union Sci. & Tech. Soc. Power Engineer 2nd Prize, 1949, elect. power econo y.

TMKIN, Aleksandr, tokar', brigadir kollektiva kommunisticheskogo truda

Our cherished thoughts and hopes. Sov. profsoiuzy 16 no.19:6 O '60.
(MIRA 13:10)

1. Moskovskiy zavod imeni Vladimira Il'icha.
(World politics)   (United nations)

TEVLIN, A. M.

"Geometric Method for Investigations of Three-Dimensional Gearings in Application to the Calculation of Spiral-Bevel and Hypoid Gearings." Sub 11 Jun 51, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

TEVLIN, A.M.

CHETVERUKHIN,Nikolay Fedorovich; LEVITSKIY, Vladimir Sergeyevich;
PRYANISHNIKOVA, Zoya Ivanovna, TEVLIN, Abram Maksimovich, FEDOTOV,
Georgiy Ivanovich; KOTOV, I.I., redaktor; TSVETKOV, A.T., redaktor;
GAVRILOV, S.S., tekhnicheskiy redaktor

[A course in descriptive geometry] Kurs nachertatel'noi geometrii.
Pod red. N.F.Chetverukhina. Moskva, Gos. izd-vo tekhniko-teoret.
lit-ry, 1956. 435 p.
        (Geometry, Descriptive)   (MLRA 10:2)

TEVLIN, A. M.

"Geometrical Method for Investigating Spatial Gearings in Application to the Calculation of Spiral Bevel and Hypoid Gears." Thesis for degree of Cand Technical Sci. Sub 20 Nov 50, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva. Jan-Dec. 1950.

TEVLIN, A. M.

Cand Tech Sci

Dissertation: "Geometrical Method for Investigating Spatial Gearings In
Application to the Calculation of Spiral Bevel and Hypoid Gears."

20/11/50

Moscow Order of Lenin Aviation Inst

emeni Sergo Ordzhonikidze.

SO Vecheryaya Moskva
Sum 71

39045

S/145/62/000/002/007/009
D262/D308

10.6400

AUTHOR: Tevlin, A.M., Candidate of Technical Sciences

TITLE: Helical projection and its application in solving geo-
             metrical and technical problems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroye-
             niye, no. 2, 1962, 130 - 141

TEXT: The geometrical principles of the new method of curvilinear
projection of 3-dimensional objects on a plane is presented. The
projecting lines are helical lines with a common axis and the same
pitch H or parameter K, instead of straight lines. The parameter K
is found from

$$k = r \, tg \, \beta = \frac{z}{q} = \frac{H}{2\pi},\qquad(1)$$

where r - radius, and β - angle of ascent. Several typical construc-
tions are shown and discussed in detail. They include: Straight line
parallel to, and intersecting the axis of the helix at arbitrary
angles; point of intersection of a straight line with a spiral sur-

Card 1/2

Helical projection and its ...   S/145/62/000/002/007/009
                                                  D262/D308

face; point of intersection of straight lines with helical surface; line of intersection of a helical surface with a sphere. It is stated that this method can be applied effectively to various problems in many fields of machine design where helical surfaces are used. There are 8 figures.

ASSOCIATION: Moskovskiy aviatsionnyy institut (Moscow Aviation Institute)

SUBMITTED: March 1, 1961

Card 2/2

NIKOLAYEVSKIY, Georgiy Konstantinovich; PANOV, Vladimir Stepanovich;
TOMAREVSKAYA, Yevgeniya Stepanovna; SITNIKOV, Vladimir
Stepanovich; CHETVERUKHIN, N.F.; LEVITSKIY, V.S.;
PRYANISHNIKOVA, Z.I.; TEVLIN, A.M.; FEDOTOV, G.I.;
DMITRENKO, Ye.P., otv. red.; KURILOVA, T.M., red.;
NESTERENKO, A.S., red.; ALEKSANDROVA, G.P., tekhn.red.

[Required practice work in descriptive geometry] Obiaza-
tel'nyi praktikum po nachertatel'noi geometrii. Khar'kov,
Khar'kovskii gos.univ., 1963. 122 p.   (MIRA 17:1)